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**REMARKS**

This response is intended as a full and complete response to the non-final Office Action mailed August 23, 2005. In the Office Action, the Examiner notes that claims 1-30 are pending of which claims 1-3, 5, 7, 8, 10-17, 21 and 27-30 are rejected and claims 4, 6, 9, 18-20 and 22-26 are objected to.

By this response, Applicants have amended claims 1, 4, 10, 27 and 28.

In view of both the amendments presented above and the following discussion, Applicants submit that none of the claims now pending in the application are anticipated or obvious under the respective provisions of 35 U.S.C. §102 and 103.

It is to be understood that Applicants, by amending the claims, do not acquiesce to the Examiner's characterizations of the art of record or to Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant responsive amendments.

**REJECTIONS****35 U.S.C. §102****Claims 1, 5, 7, 8, 10-14, 21, 27, 28**

The Examiner has rejected claims 1, 5, 7, 8, 10-14, 21, 27 and 28 under 35 U.S.C. §102(e) as being anticipated by Hayashi et al. (U.S. Patent 6,891,661 B2, hereinafter "Hayashi").

Independent claim 1 (and similarly independent claims 10, 27 and 28) recites:

1. A method for controlling Raman gain tilt in a WDM optical communication system, comprising:
  - determining a first spectral profile of an input WDM optical signal;
  - filtering the WDM optical signal to produced a filtered WDM optical signal having a second spectral profile;
  - determining an average loss between the input WDM optical signal and the filtered WDM optical signal using said first and second spectral profiles; and

If the average loss varies, adjusting a gain parameter of the optical communication system such that a respective average power of each of

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the optical channels present in the WDM optical signal remains substantially constant, wherein a change in the average loss is due to a transient event.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). The Hayashi reference fails to disclose each and every element of the claimed invention, as arranged in the claims.

Hayashi discloses a Raman amplifier for amplifying a wavelength division multiplexed (WDM) light. The amplifier includes an optical amplifying medium and a controller. The optical amplifying medium uses Raman amplification to amplify the WDM light in accordance with multiplexed pump lights of different wavelengths traveling through the optical amplifying medium. The WDM light is amplified in a wavelength band divided into a plurality of individual wavelength bands. A controller controls power of each pump light based on a wavelength characteristic of gain generated in the optical amplifying medium in the individual wavelength bands (See abstract, FIG. 15).

However, Hayashi does not teach, show or suggest determining an average loss and adjusting the gain parameters, wherein a change in the average loss is due to a transient event as recited in claims 1, 10, 27, and 28.

As such, Applicants submit that independent claims 1, 10, 27, and 28 are not anticipated by Hayashi and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Furthermore, claims 5, 7, 8, 11-14 and 21 depend directly or indirectly from independent claims 1, 10, 27, and 28 and recite additional limitations thereof. As such and at least for the same reasons as discussed above, Applicants submit that these dependent claims also not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Therefore, Applicants respectfully request the rejection be withdrawn.

### **35 U.S.C. §103**

### **Claims 2, 3, 15, 16, 17, 29 and 30**

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The Examiner has rejected claims 2, 3, 15, 16, 17, 29 and 30 under 35 U.S.C. §103(a) as being unpatentable over Hayashi. Applicants respectfully traverse the rejection.

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). For at least the reasons discussed above with respect to the Examiner's 35 U.S.C. §102 rejection, the Hayashi reference fails to teach or suggest Applicants' invention as a whole.

As explained above, the Hayashi reference fails to teach or suggest Applicants' claimed determining an average loss and adjusting the gain parameters, wherein a change in the average loss is due to a transient event as recited in claims 1, 10, 27, and 28.

As such, Applicants submit that independent claims 1, 10, 27 and 28 are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Furthermore, claims 2, 3, 15, 16, 17, 29 and 30 depend directly or indirectly from independent claims 1, 10, and 28 and recite additional limitations thereof. As such, and at least for the same reasons as discussed above, Applicants submit that these dependent claims also are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

#### **ALLOWABLE SUBJECT MATTER**

The Examiner has objected to claims 4, 6, 9, 18-20 and 22-26 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants thank the Examiner for indicating allowable subject matter but believe independent claims 1 and 10 from which dependent claims 4, 6, 9, 18-20 and 22-26 depend are allowable over the prior art of record for the reasons set forth above. It therefore follows that Applicants believe that dependent claims 4, 6, 9, 18-20 and 22-

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26 are also allowable. Therefore, Applicants respectfully request that the foregoing objection to claims 4, 6, 9, 18-20 and 22-26 be withdrawn.

### SECONDARY REFERENCES

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

### CONCLUSION

Thus, Applicants submit that all claims now pending are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall or Jasper Kwoh at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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